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Estimations of Magnitude of Nova Aurigæ, made at the Radcliffe Observatory, Oxford. By E. J. Stone, Esq., M.A., F.R.S., Radcliffe Observer.

Date.	Observer.	Observed Magnitude of *Nova*.	Comparison stars.	Remarks.
1892.				
Feb. 3	F. B.	4·4	—	Transit-circle observation. No colour to star.
3	E. J. S. and R.	4·5	χ Aurigæ	Observed with Barclay Equatoreal. Star reddish.
5	R.	4·6	...	Transit-circle observation.
13	F. B.	5·1	...	Transit-circle observation.
16	R.	5·7	χ Aurigæ	Naked-eye estimation.
18	F. B.	5·3	...	Transit-circle observation. Star reddish.
22	W.	5·3	...	Straw yellow. Transit-circle observation.
24	R.	6·1	Arg. Z + 30°·898 and 963	Observed with Barclay Equatoreal on February 24, and all succeeding dates.
Mar. 19	E. J. S.	8·8	*v*, *w*, *x*, *k*, *a*, and Arg. 963	
19	F. B.	9·1	*v*, *w*, *x*, *k*, Arg. Z + 30°·938 and 939	Red colour.
22	W.	9·6	*g*, *h*, *i*, *k*	Not very red, but occasionally a deep red flicker seemed to pass over the image.
22	R.	9·6	*a*, *h*	
24	R.	10·4	*a*, *g*, *i*, *k*	
24	W.	10·7	*a*	
25	W.	11·7	*a*, *b*, *c*	Just discernible through haze.
28	F. B.	13·1	*e*, *ξ*, *d*, *c*, *j*	Sky very clear.
29	R.	13·0	*b*, *c*, *d*, *ξ*	Very cloudy. Observed in brief intervals of cloud.
30	F. B.	13·7	*c*, *f*, *d*, *p*, *ξ*	Very brilliant sky. Moon nearly set.
30	W.	14·0	*ξ*	Probably near the limit of the power of the telescope.
31	W.	14·0	*ξ*, *d*	Not continuously seen.
31	F. B.	14·0	*p*, *d*, *ξ*	Sky very clear, but moonlight.

Moonlight has interfered to some extent with any further observations; but, as a matter of fact, although the star has

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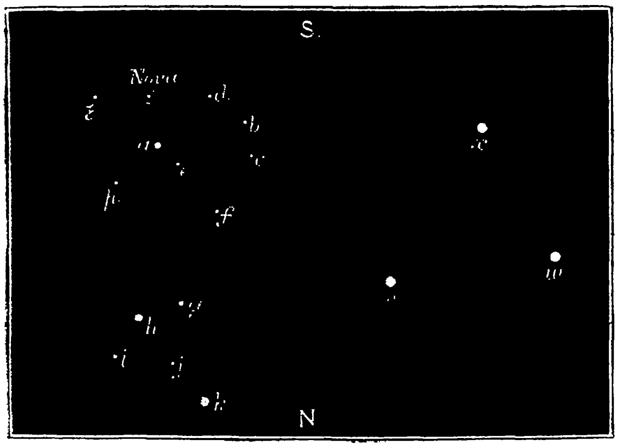
been looked for on all clear nights up to April 7, it has not been distinctly recognised since March 31.

Observers: E. J. S., Mr. Stone; W., Mr. Wickham; R., Mr. Robinson; F. B., Mr. Bellamy.

The relative positions of many of the comparison stars and *Nova* are roughly indicated in the following chart:—



	h m		° ′	
Nova = R.A.	5 25	N.P.D.	59 38	(1892·0)
Star *k* = ,,	5 25	,,	59 28	,,

The following are the adopted magnitudes of the comparison stars (in the chart) used in determining the brightness of the *Nova*; they are derived from observation. The magnitude of star *k* is *assumed* to be 9·5 (from *Argelander*), and the limit of vision 14·5.

a = 10·2 mag.	*i* = 10·3 mag.	
b = 11·8 ,,	*j* = 12·3 ,,	
c = 12·0 ,,	*k* = 9·5 ,,	Arg. Z + 30°, No. 924
d = 13·5 ,,	*v* = 9·7 ,,	
e = 13·4 ,,	*w* = 9·7 ,,	
f = 13·5 ,,	*x* = 9·7 ,,	
g = 10·2 ,,	*p* = 14·3 ,,	
h = 9·7 ,,	*ξ* = 13·9 ,,	

The magnitudes of the remaining comparison stars are taken from *Argelander*, viz.:—

χ Aurigæ	5·0 mag.
Arg. Z + 30°·898	6·2 ,,
Arg. Z + 30·963	6·0 ,,
Arg. Z + 30·938	8·7 ,,
Arg. Z + 30·939	9·5 ,,

The magnitudes of the comparison stars, and therefore of the *Nova* referred to them, are at present only provisional.

Radcliffe Observatory, Oxford:
1892 *April* 8.

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The New Star in Auriga. By George Knott, B.A., LL.B.

The following observations of the new star in *Auriga* form a continuation of the series in the March number of the *Monthly Notices*. The magnitudes were either gauged directly by the method of limiting apertures, or estimated by comparison with stars the magnitudes of which had been so gauged:—

		m			m
Mar.	12	7·0	Apr.	1	13·4
	14	7·7		2	13·5
	18	8·9		3	13·5
	19	9·1			
	25	11·6			
	28	12·2			
	30	13·0			
	31	13·3			

As the star decreased in brightness its colour seemed to deepen slightly to a ruddy orange. On March 18 the F line in the spectrum was still bright and well seen, but I felt doubtful as to other lines. I thought it probable that as the light of the new star faded I should find that I had underestimated the magnitude of the 11 mag. star referred to, with measures, in my former paper. This has proved to be the case. From several determinations I find 10·6 as this star's probable magnitude. The star D.M.+30°·924 I have observed to be 10·5 mag., a magnitude fainter than the D.M. estimate. This star is preceded 10^s, $3'$*s.*, by a rather brighter star of about 10·3 magnitude.

I give below a list of approximate places for 1892·0 of some small stars in the near neighbourhood of the new star. As most of the stars are faint, the places given are only rough approximations. In the list the new star is marked "var."

Mag.	R.A. h m s	Decl. ° ′
13·3	5 25 0	+30 22·4
var.	25 3	21·8
10·6	25 6	23·0
13·4	25 6	20·1
13·6	25 9	23·1
11·9	25 13	20·0
12·2	25 16	20·1

If the places of the stars in the above list are roughly charted, and compared with the sky, there will, I think, be no difficulty